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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,101	12/10/2001	Thomas Schmulling	1195-2	2633

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EXAMINER

BAUM, STUART F

ART UNIT	PAPER NUMBER
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1638

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/014,101	SCHMULLING ET AL.	
	Examiner	Art Unit	
	Stuart F. Baum	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-137 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-137 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-4, 7-17, 25, 28-44, 46-47, 49-50, 52-53, 79-81, 86-87, 90-92, 95-101, 103-137, drawn to a method for stimulating root growth or enhancing the formation of lateral or adventitious roots, comprising expression of a nucleic acid encoding a plant cytokinin oxidase, an isolated nucleic acid encoding a plant protein having cytokinin oxidase activity or vector and host cell transformed therewith; a method for increasing the size of the root meristem, a method for altering leaf senescence, a method of increasing leaf thickness, a method for reducing vessel size, a method for improving standability of seedlings, a method for increasing branching, a method of increasing seed size or weight, a method for increasing embryo size or weight, a method of increasing cotyledon size or weight, comprising expression of a nucleic acid of claim 3 or 4, classified in class 800, subclass 290 for example.

If Applicant elects Group I, Applicant is also to elect one DNA sequence and one corresponding amino acid sequence that is encoded by the elected DNA sequence. Applicant is to elect the sequences from the list of sequences as specified in claims 2 and 3. Sequences are to be specified using SEQ ID NO:'s.

- II. Claims 5-6, drawn to a probe, classified in class 536, subclass 24.3 for example.

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- III. Claims 18-22, 26-27, 82-83, drawn to an isolated polypeptide and method for the production of an altered plant comprising introduction of polypeptide into a plant, classified in class 530, subclass 370 for example.

If Applicant elects Groups II or III, Applicant is also to elect one DNA sequence and one corresponding amino acid sequence that is encoded by the elected DNA sequence. Applicant is to elect the sequences from the list of sequences as specified in claim 3. Sequences are to be specified using SEQ ID NO:'s.

- IV. Claims 23-24, 84-85, drawn to an antibody, classified in class 424, subclass 130.1 for example.

- V. Claims 1-2, 45, 48, 51, 54, drawn to a method for altering root geotropism, classified in class 435, subclass 468 for example.

If Applicant elects Group V, Applicant is also to elect one DNA sequence and one corresponding amino acid sequence that is encoded by the elected DNA sequence. Applicant is to elect the sequences from the list of sequences as specified in claims 2 and 3. Sequences are to be specified using SEQ ID NO:'s.

- VI. Claims 55-78, 102, drawn to methods for identifying and obtaining proteins or compounds interacting with a polypeptide, classified in class 530, subclass 412 for example.

- VII. Claims 88-89, 93 drawn to a method for increasing the size of the shoot meristem and increasing vessel size comprising downregulation of expression of a nucleic acid encoding a plant protein having cytokinin oxidase activity, classified in class 800, subclass 285 for example.

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VIII. Claim 94, drawn to a method for inducing parthenocarpy comprising expression of a nucleic acid encoding a plant protein having cytokinin oxidase activity in the placenta, and ovules, classified in class 800, subclass 287 for example.

If Applicant elects Groups VII or VIII, Applicant is also to elect one DNA sequence and one corresponding amino acid sequence that is encoded by the elected DNA sequence. Applicant is to elect the sequences from the list of sequences as specified in claim 3. Sequences are to be specified using SEQ ID NO:'s.

2. Inventions I and II are unrelated to each other. Applicant is reminded that nucleotide sequences encoding different polypeptides are structurally distinct chemical compounds and are unrelated to one another, as are different polypeptides structurally distinct chemical compounds and unrelated to one another. These sequences are thus deemed to normally constitute **independent and distinct** inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq (see MPEP 803.04 and 2434). This requirement is not to be construed as a requirement for an election of species, since each nucleotide and amino acid sequence is not a member of a single genus of invention, but constitutes an independent and patentably distinct invention.

3. Inventions I-II and III-IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct from each other because the starting materials, method steps and end products are distinct and unrelated to each other. Furthermore, the proteins of Invention III and IV could be made by a process other than the expression of the gene of Inventions I and II,

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such as chemical synthesis or purification from the natural source, and the DNA of Invention I and II may be used for a process other than the production of a protein, such as a nucleic acid hybridization. Lastly, DNA and protein differ in composition, structure and function.

4. Inventions I-II and V, VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct from each other because the starting materials, method steps and end products are distinct and unrelated to each other. Examples of divergent methods are the additional method steps required to produce a plant with alter geotropic response, and producing a plant that exhibits parthenocarp requires a tissue/organ specific promoter.

5. Inventions I-II and VI-VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct from each other because the starting materials, method steps and end products are distinct and unrelated to each other. Examples of divergent method steps are the yeast 2-hybrid system and antisense or co-suppression technologies.

6. Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct from each other because the end products are distinct and unrelated to each other. The proteins of Group III have a distinct structure and function that is different from

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the antibodies of Group IV. In addition, the antibodies of Group IV cannot be used in the method steps of Group III.

7. Inventions III and Inventions V and VIII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the protein can be used to generate antibodies and the methods of Groups V and VIII can use nucleic acid molecules.

8. Inventions III-V, and VIII and Inventions VI-VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct from each other because the starting materials, method steps and end products are distinct and unrelated to each other. Examples of divergent method steps are protein isolation of Group III, yeast 2-hybrid system of Group VI, antisense technologies of Group VII, over-expression of a nucleic acid molecule of Groups V and VIII, and protein detection using antibodies of Group IV.

9. Inventions IV and Inventions V and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct from each other because the starting materials, method steps and end products are distinct and unrelated to each other. Examples of divergent

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method steps are protein detection of Group IV and over-expression of nucleic acid molecules of Groups V and VIII.

10. Each of Inventions V, VI, VII and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct from each other because the starting materials, method steps and end products are distinct and unrelated to each other. Examples of divergent method steps are processes specific to altering root geotropism of Group V, the yeast 2-hybrid system of Group VI, antisense technologies of Group VII and over-expression of a nucleic acid using a tissue or organ specific promoter of Group VIII.

11. Because these inventions are distinct for the reasons given above, have acquired a separate status in the art as shown by their different classification, and the literature and sequence searches required for each of the Groups are not required for another of the Groups, restriction for examination purposes as indicated is proper.

12. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).


13. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

A handwritten signature in black ink, appearing to read 'Stuart F. Baum', with a stylized, flowing script.

Stuart F. Baum Ph.D.
Patent Examiner
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January 28, 2004